Claims

1. A method for communicating packets from a packet source in a first network to a packet destination in a second network, where said packet destination has a network address X, comprising the steps of:

communicating, from an element in said second network to an element in said first network, an address Y that corresponds to address X mapped with function $\mathcal{Q}$; and

mapping, in a node in said second network, at least a sub-field of an address field contained in packets received from said first network with a function $\mathcal{P}$, where $\mathcal{Q}$ and $\mathcal{P}$ are functions such that $\mathcal{P}(\mathcal{Q}(X))=X$.

2. The method of claim **1** where functions $\mathcal{P}$ and $\mathcal{Q}$ change upon occurrence of an event.

3. The method of claim **2** where said event is reception of a change-specification signal, or a specified change in the time-of-day.

4. The method of claim **2** where said functions $\mathcal{Q}$ and $\mathcal{P}$ change at regular time intervals.

5. The method of claim **1** where said changes to said mapping function $\mathcal{Q}$ and mapping function $\mathcal{P}$ are algorithmically determined.

6. The method of claim **1** where said changes to said mapping function $\mathcal{Q}$ and mapping function $\mathcal{P}$ are determined by reference to a table that is stored in said element of said second network, and a table that is stored in said node.

7. The method of claim **6** where said table in said node contains seed values that are used to develop a decryption function to serve as mapping function $\mathcal{P}$, and said table in said element of said second network contains seed values that are used to develop a decryption function to serve as mapping function $\mathcal{Q}$.

8. The method of claim **1** further comprising the step of communicating, from said element in said second network, an identifier that is instrumental in routing said packets from said first network to said second network.

9. The method of claim **1** where said node includes links to elements outside said second network.

10. The method of claim **9** where said elements outside said second network are nodes in a third network.

11. The method of claim **9** where said elements outside said second network are links to a PSTN network.

12. The method of claim **9** where said elements outside said second network are Media Terminal Adapters

13. The method of claim **1** where said node includes links to nodes outside said second network.

14. The method of claim **1** where said element is said second network is a call agent.

15. The method of claim **14** where said call agent implements communication features for said packet destination.

16. The method of claim **1** where said element in said first network is a call agent.

17. The method of claim **16** where said step of communicating employs a third network for communicating from said call agent in said second network to

said call agent in said first network.

18. The method of claim **1** further comprising said node, after performing said step of mapping, carrying out the steps of:

determining whether result of said mapping correspond to a valid packet destination in said second network; and

if said step of determining concludes that said result of said mapping does not correspond to a valid packet destination in said second network, mapping said at least a sub-field of an address field contained in packets received from said first network with a function $\mathcal{P}'$, which corresponds to the mapping function employed by said node prior to the last change in mapping function $\mathcal{P}$.

19. The method of claim **1** where said first network and said second network carry information in packet format or switched-circuit format.

20. The method of claim **1** where said node in said second network receives said packets from said first network via one or more other networks.

21. A method for communicating packets from a packet source in a first network to a packet destination in a second network, where said packet destination has a network address X, comprising the steps of:

communicating, from an element in said second network to an element in said first network, an address Y that corresponds to address X mapped with function $\mathcal{Q}$ that is an encryption function; and

mapping, in a node in said second network, at least a sub-field of an address field contained in packets received from said first network with a function $\mathcal{P}$ that is a decryption function corresponding to said encryption function $\mathcal{P}$, and functions $\mathcal{P}$ and $\mathcal{Q}$ are generated independently of communication between said element in said second network and said node in said second network.